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EXAMINER

HOLLIDAY, JAIME MICHELE

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2686

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/673,153	Applicant(s) TAKEDA ET AL.	
	Examiner Jaime M. Holliday	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1,2,7 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/23/04 & 12/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on February 23, 2004 and December 9, 2004 have been considered by the Examiner and made of record in the application file.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "**19** and **21**" and "**34** and **31**" have both been used to designate "communication controller" and "transmission information source," respectively.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "**35**" has been used to designate both "demodulator" and

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“modulator,” and reference character “**36**” has been used to designate both “modulator” and “demodulator.”

5. The drawings are objected to because of the following informalities: **item 24** should be labeled “demodulator” and **item 32** should be labeled “modulator” as they are respectively specified in the disclosure.

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities:
- a) On **page 3 line 3**, replace "terminal" with --apparatus-- after "wireless" in order to appropriately use the antecedent basis established on **page 2 line 35**.
 - b) On **page 7 line 21**, "C2" should be replaced with --C1-- after "channel."
- Appropriate correction is required.

Claim Objections

8. **Claim 1** is objected to because of the following informalities: On **line 5 of claim 1**, replace "terminal" with --apparatus-- after "wireless". **Claim 2** is objected to because of the following informalities: On **line 2 of claim 2**, replace "synthesizer" with --synchronizer-- after "information". **Claim 7** is objected to because of the following informalities: On **line 15 of claim 7**, replace "synthesizer" with --synchronizer-- after "information" and replace "synthesizes" with --synchronizes-- after "which". **Claim 12** is objected to because of the following informalities: On **line 4 of claim 12**, replace "performbroadcast" with --perform broadcast-- after "wireless". Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. **Claims 1, 3, 6, 12, 13 and 16-20** are rejected under 35 U.S.C. 102(e) as being anticipated by **Kim (U.S. Patent # 6,873,853 B2)**.

Consider **claim 1**, Kim clearly shows and discloses a cellular mobile communication system network reading on the claimed "wireless system" (abstract and column 3 lines 6-7), comprising: an apparatus for providing a commercial type of broadcasting service to a mobile subscriber terminal through a wireless channel, reading on the claimed "wireless apparatus which performs a broadcast service for a plurality of wireless terminals" (figure 1 and column 3 lines 50-52);

a uni-directional downlink channel carrying the broadcasting traffic is referred to as a CTBCH (Common Traffic Broadcasting Channel), the CTBCH channel serves to transmit the broadcasting traffic data to all the authorized mobile subscribers reading on the claimed "simplex first wireless channels each being set between said wireless terminal and said plurality of wireless terminals for the broadcasting service"; and

a bi-directional channel carrying the control signals is referred to as a SSCH (Secure Signaling Channel), the SSCH channel is a dedicated channel for signaling to a specified authorized subscriber only, usable for the purposes, for example, of calling, channel connection, protocol agreement, information

transfer, and/or channel release reading on the claimed "bidirectional second wireless channel being set between said wireless apparatus and said plurality of wireless terminals, for adding supplemental service to said broadcast service" (column 5 lines 10-20).

Consider **claim 3**, and **as applied to claim 1 above**, Kim clearly shows and discloses enciphering a series of broadcasting data received from a broadcasting system, with the common traffic ciphered key, and then broadcasting the series of broadcasting data through a common traffic broadcasting channel, reading on the claimed "first wireless channels transmit by encoding information"; and

transmitting a control signal with a common traffic ciphered key having a specified validation period, through a secure signal channel assigned exclusively to a respective authorized subscriber terminal for the broadcasting service, reading on the claimed "second wireless channel transmits key information which encrypts information transmitted via said first wireless channel" (column 3 lines 8-15).

Consider **claim 6**, and **as applied to claim 1 above**, Kim clearly shows and discloses periodic updating of the common traffic ciphered key according to said respective validation period, reading on the claimed "decrypting information of said encrypted broadcast service" (column 3 lines 17-18).

Consider **claim 12**, Kim clearly shows and discloses a base station **110**, reading on the claimed "wireless base station," comprising:

a common traffic broadcasting channel, a uni-directional downlink channel carrying the broadcasting traffic, reading on the claimed "simplex first wireless channels each being set for a plurality of wireless terminals, which perform broadcast service"; and

a dedicated secure signal channel, a bi-directional channel carrying the control signals, assigned to a respective authorized subscriber terminal for the broadcasting service, reading on the claimed "a bidirectional second wireless channel set for at least one of said plurality of wireless terminals, which offers an supplemental service relating to said broadcast service" (column 3 lines 56-64 and column 5 lines 10-20).

Consider **claim 13**, and **as applied to claim 12 above**, Kim clearly shows and discloses at least one base station, reading on the claimed "wireless base station," enciphering the formatted broadcasting data provided from the broadcasting system, with the common traffic ciphered key, for broadcasting through a common traffic broadcasting channel, reading on the claimed "first wireless channel transmits information encrypted"; and

transmitting a control signal including a common traffic ciphered key having a specified validation period through a dedicated secure signal channel assigned to a respective authorized subscriber terminal, reading on the claimed "second wireless channel transmits key information which decrypts information transmitted via said first wireless channel" (column 3 lines 56-64).

Consider **claim 16**, Kim clearly shows and discloses at least one mobile subscriber terminal **120** and an apparatus for providing a commercial type of broadcasting service to a mobile subscriber terminal through a wireless channel, reading on the claimed "wireless terminal receives offering of a broadcast service from a wireless apparatus," comprising:

deciphering the broadcasting signal received through the common traffic broadcasting channel, which is a uni-directional downlink channel carrying the broadcasting traffic, reading on the claimed "simplex first wireless channel set for said wireless apparatus, which receives a broadcast service from said wireless apparatus"; and

receiving the control signal through the dedicated secure signal channel, which is a bi-directional channel carrying the control signals, reading on the claimed "bidirectional second wireless channel set for said wireless apparatus, which receives an supplemental service relating to said broadcast service from said wireless apparatus" (column 3 lines 50-52 and 64-67, column 4 lines 1-4 and column 5 lines 10-11 and 13-14).

Consider **claim 17**, and **as applied to claim 16 above**, Kim clearly shows and discloses at least one mobile subscriber terminal, reading on the claimed "wireless terminal," deciphering the broadcasting signal received through the common traffic broadcasting channel with the obtained common traffic ciphered key to obtain therefrom the broadcasting data, reading on the claimed "first wireless channel transmits information encrypted"; and

obtaining the common traffic ciphered key from the control signal received through the dedicated secure signal channel, reading on the claimed "second wireless channel transmits key information which encrypts information transmitted via said first wireless channel" (column 3 lines 64-67 and column 4 lines 1-4).

Consider **claim 18**, Kim clearly shows and discloses a mobile subscriber terminal, reading on the claimed "wireless terminal" and at least one base station, reading on the claimed "first and second wireless apparatus," (column 3 lines 56 and 64) comprising:

deciphering the broadcasting signal received through the common traffic broadcasting channel, which is a uni-directional downlink channel carrying the broadcasting traffic, reading on the claimed "simplex first wireless channel set for said wireless apparatus, which receives a broadcast service from said wireless apparatus"; and

receiving the control signal through the dedicated secure signal channel, which is a bi-directional channel carrying the control signals, reading on the claimed "bidirectional second wireless channel set for said wireless apparatus, which receives an supplemental service relating to said broadcast service from said wireless apparatus" (column 3 lines 64-67, column 4 lines 1-4 and column 5 lines 10-11 and 13-14).

Consider **claim 19**, and **as applied to claim 18 above**, Kim clearly shows and discloses at least one mobile subscriber terminal, reading on the claimed

"wireless terminal," deciphering the broadcasting signal received through the common traffic broadcasting channel with the obtained common traffic ciphered key to obtain therefrom the broadcasting data, reading on the claimed "first wireless channel transmits information encrypted"; and

obtaining the common traffic ciphered key from the control signal received through the dedicated secure signal channel, reading on the claimed "second wireless channel transmits key information which encrypts information transmitted via said first wireless channel" (column 3 lines 64-67 and column 4 lines 1-4).

Consider **claim 20**, Kim clearly shows and discloses a method of a cellular mobile communication system network, reading on the claimed "wireless communication method," comprising:

providing only authorized mobile subscribers with a specified commercial broadcasting service through a wireless channel in a base station, and by enciphering a series of broadcasting data received from a broadcasting system, with the common traffic ciphered key, and then broadcasting the series of broadcasting data through a common traffic broadcasting channel, reading on the claimed "performing a broadcast service from a wireless apparatus to a plurality of wireless terminals, by using simplex first wireless channels each being set between said wireless apparatus which performs the broadcast service for said plurality of wireless terminals and each of said plurality of wireless terminals"; and

transmitting a control signal with a common traffic ciphered key having a specified validation period, through a secure signal channel assigned exclusively to a respective authorized subscriber terminal for the broadcasting service, reading on the claimed "offering an supplemental service relating to said broadcast service by using a bidirectional wireless channel set between said wireless apparatus and at least one of said plurality of wireless terminal" (figures 1 and 2, column 2 lines 57-59 and column 3 lines 4-15).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. **Claims 2, 7, 8 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim (U.S. Patent # 6,873,853 B2)** in view of **Tanaka et al. (U.S. Patent # 6,256,509 B1)**.

Consider **claim 2**, Kim clearly shows and discloses the claimed invention as applied to **claim 1** above.

Kim, however, does not specifically disclose that the cellular mobile communication system network, reading on the claimed "wireless system" (abstract and column 3 lines 6-7), further comprises an information synchronizer.

In the same field of endeavor, Tanaka et al. clearly show and disclose a broadcast information delivering system, reading on the claimed "wireless system," that includes a plurality of wireless terminals **60** and a wireless base station **20** transmitting to a control channel, reading on the claimed "second wireless channel," the system control information and broadcast control information, and transmitting the broadcast frame containing broadcast information to be received by unspecified wireless terminals to a specific channel defined by the broadcast control information, reading on the claimed "first

wireless channel" (abstract, column 1 lines 59-60 and column 2 lines 20-29).

The broadcast start time **303** of the broadcast frame indicates the broadcast start time of a sub-frame of the broadcast frame. If a system clock inherent to the cellular system designates this time, it will be easy to synchronize the base station with the mobile station for receiving the broadcast frames, reading on the claimed "information synthesizer which synchronizes a time frame of information transmitted via said first and second wireless channels with each other," (figures 3 and 4, column 6 lines 66-67 and column 7 lines 1-4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the system clock inherent to the cellular system, reading on the claimed "wireless system," as taught by Tanaka et al. in the cellular mobile communication system network, reading on the claimed "wireless system," of Kim, in order to synchronize the information on the common traffic broadcasting channel and secure signal channel, reading on the claimed "first and second wireless channels."

Consider **claim 7**, Kim clearly shows and discloses a cellular mobile communication system network reading on the claimed "wireless system" (abstract and column 3 lines 6-7), comprising:

an apparatus for providing a commercial type of broadcasting service to a mobile subscriber terminal through a wireless channel, reading on the claimed "a first wireless apparatus which performs a broadcast service for a plurality of wireless terminals and a second wireless apparatus which performs an

supplemental service relating to said broadcast service" (figure 1 and column 3 lines 50-52);

a uni-directional downlink channel carrying the broadcasting traffic is referred to as a CTBCH (Common Traffic Broadcasting Channel), the CTBCH channel serves to transmit the broadcasting traffic data to all the authorized mobile subscribers reading on the claimed "simplex first wireless channels each being set between said first wireless apparatus and said plurality of wireless terminals, in which said first wireless apparatus performs said broadcast service to said plurality of wireless terminals"; and

a bi-directional channel carrying the control signals is referred to as a SSCH (Secure Signaling Channel), the SSCH channel is a dedicated channel for signaling to a specified authorized subscriber only, usable for the purposes, for example, of calling, channel connection, protocol agreement, information transfer, and/or channel release reading on the claimed "a bidirectional second wireless channel set between said second wireless apparatus and at least portion of said plurality of wireless terminals, which offers said supplemental service" (column 5 lines 10-20).

However, Kim does not specifically disclose that the cellular mobile communication system network, reading on the claimed "wireless system" (abstract and column 3 lines 6-7), further comprises an information synchronizer.

In the same field of endeavor, Tanaka et al. clearly show and disclose a broadcast information delivering system, reading on the claimed "wireless

system," that includes a plurality of wireless terminals and a wireless base station transmitting to a control channel, reading on the claimed "second wireless channel," the system control information and broadcast control information, and transmitting the broadcast frame containing broadcast information to be received by unspecified wireless terminals to a specific channel defined by the broadcast control information, reading on the claimed "first wireless channel" (abstract, column 1 lines 59-60 and column 2 lines 20-29). The broadcast start time of the broadcast frame indicates the broadcast start time of a sub-frame of the broadcast frame. If a system clock inherent to the cellular system designates this time, it will be easy to synchronize the base station with the mobile station for receiving the broadcast frames, reading on the claimed "information synthesizer which synchronizes a time frame of information transmitted via said first and second wireless channels with each other," (figures 3 and 4, column 6 lines 66-67 and column 7 lines 1-4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the system clock inherent to the cellular system, reading on the claimed "wireless system," as taught by Tanaka et al. in the cellular mobile communication system network, reading on the claimed "wireless system," of Kim, in order to synchronize the information on the common traffic broadcasting channel and secure signal channel, reading on the claimed "first and second wireless channels."

Consider **claim 8**, Kim, as modified by Tanaka et al., discloses the **claimed invention as applied to claim 7 above**, and in addition, Kim further discloses enciphering a series of broadcasting data received from a broadcasting system, with the common traffic ciphered key, and then broadcasting the series of broadcasting data through a common traffic broadcasting channel, reading on the claimed "first wireless channels transmit by encoding information"; and

transmitting a control signal with a common traffic ciphered key having a specified validation period, through a secure signal channel assigned exclusively to a respective authorized subscriber terminal for the broadcasting service, reading on the claimed "second wireless channel transmits key information which encrypts information transmitted via said first wireless channel" (column 3 lines 8-15).

Consider **claim 11**, Kim, as modified by Tanaka et al., discloses the **claimed invention as applied to claim 7 above**, and in addition, Kim further discloses periodic updating of the common traffic ciphered key according to said respective validation period, reading on the claimed "decrypting information of said encrypted broadcast service" (column 3 lines 17-18).

14. **Claims 4 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim (U.S. Patent # 6,873,853 B2)** in view of **D'Amico et al. (U.S. Patent # 6,741,554 B2)**.

Consider **claim 4**, Kim clearly shows and discloses the claimed invention **as applied to claim 1 above**.

Kim, however, does not specifically disclose that the secure signal channel transmits retransmission requests and information corresponding to the information transmitted via the common traffic broadcasting channel.

In the same field of endeavor, D'Amico et al. clearly show and disclose a first wireless device in a wireless communications network, reading on the claimed "wireless system comprising a wireless apparatus," transmits an information packet to a second wireless device in the network over a first wireless communications channel, reading on the claimed "first wireless channel." The first device determines (e.g., via an acknowledgment received from the second device) whether the information packet was successfully received by the second device, reading on the claimed "uplink of said second wireless channel transmits retransmission request information of at least portion of information transmitted via said first wireless channel." If the second device did not successfully receive the information packet, the first device retransmits the information packet to the second device over a second wireless communication channel, reading on the claimed "downlink of said second wireless channel transmits information corresponding to said retransmission request information" (column 2 lines 56-67 and column 3 lines 1-2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an acknowledgement of receipt

of information, reading on the claimed "retransmission request information," and the actual retransmission of the information on the second wireless communication channel, reading on the claimed "second wireless channel," as taught by D'Amico et al., in the cellular mobile communication system network, reading on the claimed "wireless system," of Kim, in order to provide reliable communication while performing a commercial type of broadcast service.

Consider **claim 14**, Kim clearly shows and discloses the claimed invention **as applied to claim 12 above**.

Kim, however, does not specifically disclose that the base station, reading on the claimed "wireless base station," comprises a secure signal channel that transmits retransmission requests and information corresponding to the information transmitted via the common traffic broadcasting channel.

In the same field of endeavor, D'Amico et al. clearly show and disclose a first wireless device, reading on the claimed "wireless base station," transmits an information packet to a second wireless device in the network over a first wireless communications channel, reading on the claimed "first wireless channel." The first device determines (e.g., via an acknowledgment received from the second device) whether the information packet was successfully received by the second device, reading on the claimed "uplink of said second wireless channel transmits retransmission request information of at least portion of information transmitted via said first wireless channel." If the second device did not successfully receive the information packet, the first device retransmits

the information packet to the second device over a second wireless communication channel, reading on the claimed "downlink of said second wireless channel transmits information corresponding to said retransmission request information" (column 2 lines 56-67 and column 3 lines 1-2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an acknowledgement of receipt of information, reading on the claimed "retransmission request information," and the actual retransmission of the information on the second wireless communication channel, reading on the claimed "second wireless channel," as taught by D'Amico et al., in base station, reading on the claimed "wireless base station," of Kim, in order to provide reliable communication while performing a commercial type of broadcast service.

15. **Claims 5 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim (U.S. Patent # 6,873,853 B2)** in view of **D'Amico et al. (U.S. Patent # 6,741,554 B2)**, and in further view of **Tanaka et al. (U.S. Patent # 6,256,509 B1)**.

Consider **claim 5**, the combination of Kim and D'Amico as discussed in **claim 4** above shows the limitations claimed, except they do not specifically disclose that the cellular mobile communication system network, reading on the claimed "wireless system," further comprises a charge collection control unit.

In the same field of endeavor, Tanaka et al. clearly show and disclose a broadcast information delivering system, reading on the claimed "wireless

system," that includes a plurality of wireless terminals and a wireless base station transmitting to a control channel, reading on the claimed "second wireless channel," the system control information and broadcast control information, and transmitting the broadcast frame containing broadcast information to be received by unspecified wireless terminals to a specific channel defined by the broadcast control information, reading on the claimed "first wireless channel" (abstract, column 1 lines 59-60 and column 2 lines 20-29), where users are charged an information utility fee. The charged information is enciphered and a decipher key is distributed from an information provider to each user terminal (column 3 lines 64-65). A terminal apparatus, in which the term of validity for the currently holding decipher key has expired, requests the contents provider system **10** to supply a new decipher key. Upon receiving the request for a new decipher key specified by the contents ID from the terminal apparatus, the contents provider system charges the terminal apparatus for the information service charge for a period from the date of request until the expiration of the decipher date, reading on the claimed "charge collection control unit which charges in accordance with the amount of information transmitted via the downlink of said second wireless channel," (figures 1 and 4, column 6 lines 58-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a means of charging an information utility fee as taught by Tanaka et al., in the cellular mobile communication system network, reading on the claimed "wireless system," of

Kim, as modified by D'Amico et al., in order to charge for the information sent by the broadcast service.

Consider **claim 15**, the combination of Kim and D'Amico as discussed in **claim 14** above shows the limitations claimed, except they do not specifically disclose that the base station, reading on the claimed "wireless base station," further comprises a charge collection control unit.

In the same field of endeavor, Tanaka et al. clearly show and disclose a broadcast information delivering system that includes a plurality of wireless terminals and a wireless base station transmitting to a control channel, reading on the claimed "second wireless channel," the system control information and broadcast control information, and transmitting the broadcast frame containing broadcast information to be received by unspecified wireless terminals to a specific channel defined by the broadcast control information, reading on the claimed "first wireless channel" (abstract, column 1 lines 59-60 and column 2 lines 20-29), where users are charged an information utility fee. The charged information is enciphered and a decipher key is distributed from an information provider to each user terminal (column 3 lines 64-65). A terminal apparatus, in which the term of validity for the currently holding decipher key has expired, requests the contents provider system **10** to supply a new decipher key. Upon receiving the request for a new decipher key specified by the contents ID from the terminal apparatus, the contents provider system charges the terminal apparatus for the information service charge for a period from the date of request

until the expiration of the decipher date, reading on the claimed "charge collection control unit which charges in accordance with the amount of information transmitted via the downlink of said second wireless channel," (figures 1 and 4, column 6 lines 58-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a means of charging an information utility fee as taught by Tanaka et al., in the base station, reading on the claimed "wireless base station," of Kim, as modified by D'Amico et al., in order to charge for the information sent by the broadcast service.

16. **Claims 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim (U.S. Patent # 6,873,853 B2)** in view of **Tanaka et al. (U.S. Patent # 6,256,509 B1)**, and in further view of **D'Amico et al. (U.S. Patent # 6,741,554 B2)**.

Consider **claim 9**, the combination of Kim and Tanaka et al. as discussed in **claim 7** above shows the limitations claimed, except they do not specifically disclose that the secure signal channel transmits retransmission requests and information corresponding to the information transmitted via the common traffic broadcasting channel.

In the same field of endeavor, D'Amico et al. clearly show and disclose a first wireless device in a wireless communications network, reading on the claimed "wireless system comprising a first and second wireless apparatus," transmits an information packet to a second wireless device in the network over a

first wireless communications channel, reading on the claimed "first wireless channel." The first device determines (e.g., via an acknowledgment received from the second device) whether the information packet was successfully received by the second device, reading on the claimed "uplink of said second wireless channel transmits retransmission request information of at least portion of information transmitted via said first wireless channel." If the second device did not successfully receive the information packet, the first device retransmits the information packet to the second device over a second wireless communication channel, reading on the claimed "downlink of said second wireless channel transmits information corresponding to said retransmission request information" (column 2 lines 56-67 and column 3 lines 1-2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an acknowledgement of receipt of information, reading on the claimed "retransmission request information," and the actual retransmission of the information on the second wireless communication channel, reading on the claimed "second wireless channel," as taught by D'Amico et al., in the cellular mobile communication system network, reading on the claimed "wireless system," of Kim, as modified by Tanaka et al., in order to provide reliable communication while performing a commercial type of broadcast service.

Consider **claim 10**, the combination of Kim and Tanaka et al., as modified by D'Amico et al., disclose the claimed invention **as applied to claim 9 above**,

and in addition, Tanaka et al. further disclose that users in a broadcast information delivering system, reading on the claimed "wireless system," are charged an information utility fee. The charged information is enciphered and a decipher key is distributed from an information provider to each user terminal (column 3 lines 64-65). A terminal apparatus, in which the term of validity for the currently holding decipher key has expired, requests the contents provider system 10 to supply a new decipher key. Upon receiving the request for a new decipher key specified by the contents ID from the terminal apparatus, the contents provider system charges the terminal apparatus for the information service charge for a period from the date of request until the expiration of the decipher date, reading on the claimed "charge collection control unit which charges in accordance with the amount of information transmitted via the downlink of said second wireless channel," (figures 1 and 4, column 6 lines 58-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a means of charging an information utility fee as taught by Tanaka et al., in the cellular mobile communication system network, reading on the claimed "wireless system," of Kim, in order to charge for the information sent by the broadcast service.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime M. Holliday whose telephone number is (571) 272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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